agent on the musculature of the vessels, Filehne tried to solve by observing the pulmonary vessels, after laying bare the transparent pleura, which he found were not altered in calibre. On severing one sympathetic in the neck, and including the same in an induced current of such an intensity that the vascularity in the corresponding ear did not perceptibly differ from that of the other side, inhalation of the vapor caused hyperæmia only on the normal side. The legitimate deductions from this experiment are that nitrite of amyl paralyzes neither the vessels themselves, nor their nerves, but causes hyperæmia by destroying the tonus of the vaso-motor nerves. This need not be referred necessarily to paralysis of the vaso-motor centres, but may be explained on the theory of reflex inhibition. Section, however, of the *depressor* nerves (Ludwig) does not alter the result.

The heart of the frog was found to become paralyzed by the drug, while, on the contrary, the rabbit's pulse was much accelerated. The latter was counted by introducing into the heart an acupuncture-needle, armed at its free end with a pellet of sealing wax, which, at every systole, struck against a glass tumbler. After every tenth stroke, as counted by the ear, a chalk-mark was made, thus enabling the observer to record even a very frequent beat. The acceleration of the pulse is due to destruction of the tonus of the pneumogastric nerves (which, being not maintained in the frog, accounts for the want of acceleration in that animal). In conclusion, the author refers to the analogy, first pointed out by Darwin, between the effects of nitrite of amyl on animals, and the result of some psychical processes in man, manifested by blushing of certain parts of the body, and an increase in the frequency of the pulse, maintaining that blushing, etc., is not a privilege of man alone, though in animals, on account of inferior mental development, a psychical impulse is wanting, while its place can be supplied by the agent in question. H. G.

THE reaction of nerves to the galvanic current, according to whether the circuit is closed by the cathode or anode, has been studied by H. Engesser (*Pflueger's Arch.*, X., p. 147), since Hitzig asserted he had found a greater sensitiveness to the anode in his experiments on the excitability of the hemispheres. Engesser, however, could not detect any difference in effect in the peripheral nerves, either exposed in the frog or undisturbed in man. H. G.

NITRITE OF AMYL IN TETANUS.—Dr. Wm. S. Forbes read before the College of Physicians of Philadelphia, April 7th (reported in *Med. Times*), the history of a case of acute traumatic tetanus, beginning the fourth day after an extensive burn, which was treated and completely cured in forty-six days by inhalations of nitrite of amyl. Forty hours after the onset of the disease, the temperature was 102, the pulse 133, and the respiration 32, with marked opisthotonus and trismus, considerable involvement of the muscles of nutrition, and painful spasmodic paroxysms. The administration of the nitrite was commenced on the evening of the sixth day after the accident, and when the patient was in the condition above described. The sole treatment consisted in the inhalation of five drops of nitrite of amyl twice daily until the cure was complete.

Commenting on this case, Dr. Forbes offers the following as his theory of the pathology of the disease He says : "We learn that tetanus is the result of an augmented disintegration of muscular tissue ; that the products of this disintegration, lactic acid and kreatine, further excite the nervous peripheries until, by reflex action, there is established a violent and painful contraction of the voluntary muscles, which is long-continued and heretofore uncontrollable ; that in traumatic tetanus the augmented disintegration of muscular tissue is caused by an increased excitation of the nerve peripheries exposed ; that in idiopathic tetanus there is a self-generated power akin to the poison of rabies and to strychnia, exciting the nerve peripheries, which, by reflex action, causes the augmented disintegration of muscular tissue, and the products of disintegration, lactic acid and kreatine, which further excite the nerve peripheries until there is established the condition known as tetanus.

"Impressed with this as the pathology of tetanus, the appropriate treatment should be the use of those agents which are known to prevent the disintegration of tissues, which will lessen the irritated nerve peripheries, which will sustain nutrition and advance the elimination of the morbid products.

"The *modus operandi* of the nitrite appears to be by arresting the process of oxidation in the tissue, and the same reasons which lead to its use in tetanus—namely, to prevent the disintegration of tissue, and to lessen the irritated nerve peripheries while nature is eliminating the morbid products—should also cause it to be employed in hydrophobia."

ESERINE IN CHOREA.—Bouchut, in an extended paper in the *Bull. Gen. de Therapeutique*, goes over the whole subject of the therapeutic action of eserine, with special reference to its employment in chorea in children. He gives in brief the results of treatment by this agent, of twenty-four cases of this disease, and sums up as follows:

En resumé, after four hundred and thirty-seven observations of eserism produced in children by moderate doses, we observe that eserine acts on the muscular contractility, which it decreases, and on the contractility of the small vessels, which it augments.

Eserine, or sulphate of eserine, may be administered by hypodermic injections, or by the stomach, and it ought to be given fasting.

Under the form of subcutaneous injections, eserine or its sulphate may be injected in doses of from three to five milligrammes; for, from the symptoms, I think it ought not to be given in greater quantity.

By injection, the action is very energetic, and the dose should not be half as large as when given by the stomach.

The action of eserine lasts from one to two or three hours, and then is entirely exhausted, permitting thus the dose to be renewed, so that in three or four during the day, fifteen or twenty milligrammes may be used.

Eserine given to children, produces its effects in a few minutes, but more quickly when given by injections, than when administered by the mouth.